

1 Amendment to the Claims:

2 This listing of claims will replace all prior versions, and
3 listings, of claims in the application using (Original) (Currently
4 Amended) (New) (Canceled) (Previously Presented) nomenclature, as
5 recited in the below listing of claims.

6
7 1.(Currently Amended) A system for communicating an analog input
8 signal as a modulated binary laser signal over a communication
9 medium recovered as a[[n]] digital output signal, the system
10 comprising

11 a sigma delta modulator for receiving the analog input signal
12 and modulating the analog signal into a modulated symbol signal,

13 a transmitter for converting the modulated symbol signal into
14 the modulated binary laser signal, and for transmitting the
15 modulated binary laser signal over the communication medium, the
16 modulated binary laser signal having a pulse width having a
17 duration representative of the analog input signal, the modulated
18 binary laser signal being transmitted asynchronously,

19 a receiver for receiving and detecting the pulse width of
20 modulated binary laser signal for providing a received symbol
21 signal, and

22 a digital filter for filtering the symbol signal into
23 the digital output signal.

24
25
26
27
28 ///

1 2. (Original) The system of claim 1 wherein the transmitter
2 comprises,

3 a symbol to binary converter for converting the modulated
4 symbol signal from the sigma delta modulator into a converted
5 digital signal, and

6 a pulse width modulator for modulating the laser signal by the
7 converted digital signal into the modulated binary laser signal as
8 a pulse width binary modulated laser signal communicated over the
9 communication medium.

10
11 3. (Original) The system of claim 2 wherein the receiver comprises,

12 a pulse width detector receiving the pulse width modulated
13 binary laser signal and for providing a detected binary signal, and

14 a binary to symbol converter for converting the detected binary
15 signal into the received symbol signal.

16
17
18 4. (Previously Presented) The system of claim 3 wherein,

19 the pulse width detector is a pulse width quantizer detector,
20 the detected binary signal is a detected quantized signal, and
21 the binary to symbol converter converts the detected quantized
22 signal into the received symbol signal.

23
24
25 5. (Original) The system of claim 1 further comprising,

26 a timing recovery loop for generating a timing signal from the
27 receive symbol signal for clocking the digital filter.

1 6. (Original) The system of claim 1 wherein,
2 the sigma delta modulator is a first order sigma delta
3 modulator.

4
5 7. (Original) The system of claim 1 wherein,
6 the sigma delta modulator is a second order sigma delta
7 modulator.

8
9
10 8. (Original) The system of claim 1 wherein the communication
11 medium is a fiber optic.

12
13 9. (Canceled)

14
15 10. Canceled)

16

17

18

19

20

21

22

23

24

25

26

27

28 ///

1 11. (Currently Amended) A system for communicating an analog input
2 signal as a pulse width modulated binary laser signal over a
3 communication medium recovered as a digital output signal, the
4 system comprising

5 a sigma delta modulator for receiving the analog input signal
6 and modulating the analog signal into a modulated symbol signal,

7 a transmitter for converting the modulated symbol signal into
8 a converted digital signal for pulse width modulating a laser
9 signal into the pulse width modulated binary laser signal, and for
10 transmitting the pulse width modulated binary laser signal over the
11 communication medium, the modulated binary laser signal having a
12 pulse width having a duration representative of the analog input
13 signal, the modulated binary laser signal being transmitted
14 asynchronously through the communication medium,

15 a receiver for receiving and detecting the pulse width of the
16 pulse width modulated binary laser signal to provide a detected
17 binary signal and for converting the detected binary signal into a
18 received symbol signal, and

19 a digital filter for filtering the symbol signal into
20 the digital output signal.

21
22
23
24
25
26
27
28 ///

1 12. (Currently Amended) The system of claim 1 wherein the modulated
2 digital laser signal is frame asynchronously communicated over the
3 communication medium.

4
5 13. (Currently Amended) The system of claim 11 wherein the
6 modulated digital laser signal is frame asynchronously communicated
7 over the communication medium.

8
9 14. (New) The system of claim 1 wherein the modulated digital laser
10 signal is for bit asynchronously communicated over the
11 communication medium.

12
13 15. (New) The system of claim 11 wherein the modulated digital
14 laser signal is for bit asynchronously communicated over the
15 communication medium.

16
17
18
19
20
21
22
23
24
25
26
27
28 ///